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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,168	08/02/2001	Theodore W. Houston	TI-23848.1	8009

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EXAMINER

DO, THUAN V

ART UNIT PAPER NUMBER

2825

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/921,168

Applicant(s)

HOUSTON, THEODORE W.

Examiner

Thuan Do

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 36-40 is/are allowed.
- 6) ☒ Claim(s) 19-31 is/are rejected.
- 7) ☒ Claim(s) 32-35 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Claims 19-40 are pending in this office action and responsive to the preliminary amendment entered 08/02/2001. Claims 1-18 have been canceled.

Claim objections

Claim 28, the phrase "compare this signal the clock period" ;

Claim 31, the phrase "a logic gate connected to provide an input to the current carrying transistor does not have a corresponding means for controlling a threshold voltage";

are unclear to what applicant intend to mean. Clarification or correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 19-31 are rejected under 35 U.S.C. 102(e) as being unpatentable over Teraoka et al., Pat. No. 6,097,113.

Regarding claim 19: Teraoka teaches a system comprising :

a first current carrying transistor (col. 1, line 52 through col. 2, line 3 with MOS transistors);

means for adjusting a threshold voltage of the current carrying transistor in response to a control voltage (col. 10, line 63 through col. 11, line 16) ; and

means for supplying the control voltage connected to the means for adjusting the threshold voltage, operable to supply a first control voltage to select a low power mode and a second control voltage to select a higher power mode relative to the first low power mode (col. 10, line 63 through col. 11, line 16 where Teraoka teaches "gate voltage VN1 used in the low speed operation or standby modes gate voltage VN1 used in the low speed operation or standby modes can be made comparatively small. Thus, necessary threshold voltage V_{th1} can be achieved with the back gate bias voltage". Examiner thinks that the function of different threshold voltage modes imply the first and second control voltages of the claimed means function).

Regarding claim 20: Teraoka teaches a system with a back gate and control voltage (col. 10, line 63 through col. 11, line 16).

Regarding claim 21: Teraoka teaches a system with a substrate associated with the current carrying transistor (col. 1, lines 8-14 such as a semiconductor integrated circuit).

Regarding claim 22: Teraoka teaches a system with a tank region (col. 14, lines 40-49 as a supply voltage).

Regarding claims 23,24: Teraoka teaches a system with the back gate (col. 1, lines 33-43).

Regarding claim 25: Teraoka teaches a system with a bond pad (col. 1, lines 33-43 as a connection of the substrate regions).

Regarding claim 26: Teraoka teaches a system with selection circuitry (col. 1, lines 33-43 as a connection of the substrate regions of back gates).

Regarding claim 27: Teraoka teaches a system with a clock signal (Figure 8 with input signal).

Regarding claim 28: Teraoka teaches a system with comparison circuitry (col. 8, lines 53-57).

Regarding claim 29: Teraoka teaches a system with a permanent fashion (col. 1, lines 33-43 the connection of the substrate regions can be consider as a permanent connection fashion).

Regarding claim 30: Teraoka teaches a system with the control voltage is operable to dynamically (col. 14, lines 21-25 the active selection signal can be consider as the function of dynamic control voltage of gates).

Regarding claim 31: Teraoka teaches a system with the current carrying transistor does not have a corresponding means (the abstract teaches "selection signals corresponding to an operation mode from a mode detection circuit, the voltage levels of back gate voltages" where the selection of mode can implies claimed means function).

Allowable Subject Matter

3. Claims 32-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reason for allowance is that the prior art of record fails to teach the connection of the source resistance transistor.

Allowable Subject Matter

4. Claims 36-40 are allowed. The reason for allowance is that the prior art of record teaches a first current carrying transistor; means for adjusting a threshold voltage of the first current carrying transistor in response to a first control voltage; means for adjusting a threshold voltage of the second current carrying transistor in response to a second control voltage; and means for independently supplying the first control voltage and the second control voltage, but fails to teach a second current carrying transistor connected in series to the first current carrying transistor.

CONTACT INFORMATION

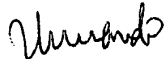
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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan Do whose telephone number is 703-305-2362.

The examiner can normally be reached on Monday-Friday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 703-308-1323. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9318 for regular and (703) 872-9319 after final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0596.



Thuan Do
Patent examiner
3/17/03